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ABSTRACT OF THE DISCLOSURE

Flt3-ligand can be used to generate large numbers of dendritic cells from hematopoietic progenitor and stem cells. Flt3-ligand can be used to augment immune responses in vivo, and expand dendritic cells ex vivo. Such dendritic cells can then be used to present tumor, viral or other antigens to naive T cells, can be useful as vaccine adjuvants. When flt3-L is used and/or administered in combination with other reactive agents, e.g. CD40 binding proteins and 4-1BBL or antibodies reactive with 4-1BB, the combination further enhances immune responses and the effectiveness of vaccine adjuvants.